

reconsideration in light of the above amendments and the following remarks is respectfully requested.

Objections to the Specification

The Office Action objected to the Abstract of the Specification because it contained 2 paragraphs. By this Amendment, a substitute Abstract is provided. Withdrawal of this objection is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1-7 and 16 are rejected under 35 U.S.C. §102(b) as being anticipated by EP Patent No. 0297678 to Parr et al. Applicant respectfully traverses this rejection. By this Amendment, claim 7 was canceled without prejudice or disclaimer, thereby mooting this portion of the rejection.

Claims 1 and 7-9 are rejected under 35 U.S.C. §102(b) as being anticipated by JP Patent No. 10258486. Applicant respectfully traverses this rejection. By this Amendment, claims 7-9 were canceled without prejudice or disclaimer, thereby mooting this portion of the rejection.

Claim 1 recites a functional film comprising a compressed layer of functional fine particles obtained by compressing a layer containing the functional fine particles that is formed by application onto a support, said functional film being a functional film other than electrical conductive film.

Claim 16 recites a functional film comprising a compressed coating layer of functional fine particles on a support, said functional film being a functional film other than electrical conductive film.

Accordingly, claims 1-6 and 16 are directed to a functional film other than a conductive film.

Parr et al. '678 discloses conductive metallization of substrates whereby a conductive metal layer is formed on a substrate. Parr et al. '678 does not disclose, teach or suggest the formation of a film other than a conductive film.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of

Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Parr et al. '678 fail to disclose, either explicitly or implicitly, at least the above-noted feature recited in independent claims 1 and 16, Parr et al. '678 cannot anticipate the claims. At least in view of the foregoing, claims 1 and 16 are allowable, and the rejection should be reconsidered and withdrawn.

Dependent claims 2-6 depend from claim 1, are also allowable for the reasons above. Moreover, these claims are further distinguished by the materials recited therein, particularly within the claimed combination. Withdrawal of the §102(b) rejection is therefore respectfully solicited.

Kimura '486 discloses the manufacture of transparent conductive resin film. Kimura '486 does not disclose, teach or suggest the formation of a film other than a conductive film.

A document can only anticipate a claim if the document discloses, explicitly or implicitly, each and every feature recited in the claim. Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Kimura '486 fails to disclose, either explicitly or implicitly, at least the above-noted feature recited in independent claim 1, Kimura '486 cannot anticipate the claim. At least in view of the foregoing, claim 1 is allowable, and the rejection should be reconsidered and withdrawn.

New Claims 17-34

Claim 17 recites a conductive film comprising a compressed layer of conductive fine particles formed by application onto a support, wherein said compressed layer of conductive fine particles is obtained by compressing a layer containing the conductive fine particles and optionally a binder resin in an amount of less than 3.7 parts by volume with respect to 100 parts by volume of said conductive fine particles onto the support, at a temperature below a glass transition temperature of said support.

Claim 23 recites a conductive film comprising a compressed coating layer of conductive fine particles on a support, wherein said compressed coating layer of conductive fine particles is obtained by compressing a coating layer containing the conductive fine particles and optionally a binder resin in an amount of less than 3.7 parts by volume with respect to 100 parts by volume of said conductive fine particles onto the support, at a temperature below a glass transition temperature of said support.

Support for the feature “compressing at a temperature below a glass transition temperature of said support” can be found in the specification at page 29, lines 21-24. The feature “optionally a binder resin in an amount of less than 3.7 parts by volume with respect to 100 parts by volume of said conductive fine particles” can be found in the specification at page 21, line 19 to page 22, line 24.

Parr et al. ‘679 discloses in claim 1 that a heating and pressing step of subjecting the metal particles to pressure and a temperature above about 200 °C for a duration sufficient to improve the conductivity of the metal layer. At col. 4, lines 25-50, Parr et al. ‘678 discloses that the glass transition temperature (T_g) of a substrate is a useful guide for choosing a molding temperature, however the molding temperature of a substrate is typically higher than the glass transition temperature of the substrate. Accordingly, claims 17 and 23 are patentable over Parr et al. ‘678.

Kimura ‘486 discloses in paragraph [0007] that ink composition containing ITO is:

- ITO fine powder of 10-30 wt%,
- Binder resin of 1-6 wt%, and
- Solvent and the like of 64-89 wt%.

Kimura ‘486 also discloses in Example in paragraph [0010] that ITO ink composition is:

- ITO fine powder of 17 wt%,
- Binder (polyester resin) of 3 wt%, and
- Solvent (cyclohexanone as main component) of 80 wt%.

In Kimura ‘486, binder resin is used at least 3.3 parts by weight with respect to 100 parts by weight of ITO fine powder according to paragraph [0007]. This corresponds to binder resin at least 16.4 parts by volume with respect to 100 parts by volume of ITO fine powder, as represented by volume. Since specific gravity of ITO is in a range of 6.9-7.1, and specific gravity of binder resin is in a range of 1.2-1.4, using 6.9 as the specific gravity of ITO and 1.4 as the specific gravity of the binder resin results in a possible minimum volume value of binder resin with respect to maximum volume of ITO. Thus, Kimura ‘486 does not disclose, teach or suggest that a binder is optionally used in an amount of less than 3.7 parts by volume of conductive fine particles. Thus, claims 17 and 23 are distinguished from Kimura ‘486.

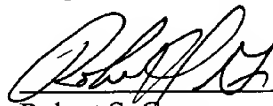
Claim 24 recites “compressing a layer containing the conductive fine particles and no binder resin onto the support, and then being impregnated with a transparent substance after compression. Support for this feature can be found in the specification, for example, at page 35, line 4 to page 40, line 25. Notably at page 35, lines 7-18, effects by impregnation with a transparent substance after compression is discussed. Neither Parr et al. 678 or Kimura ‘486 disclose, teach or suggest impregnation with a transparent substance after compression. Thus, claim 24 is distinguished from Parr et al. 678 and Kimura ‘486.

Claim 29 recites that “said conductive fine particles have a particle diameter from not less than 5nm to not more than 100nm.” Support for this feature can be found in the specification at page 34, lines 11-16. This particle size feature is not disclosed, taught or suggest in either Parr et al. ‘678 or Kimura ‘486. While Parr et al. ‘678 does disclose that the particle size is “preferably below 10 μm , a particle diameter from not less than 5nm to not more than 100nm is not disclosed, taught or suggested.

Conclusion

For the foregoing reasons, claims 1-6 and 16-34 are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of these amendments and remarks is courteously solicited. If the examiner has any comments or suggestions that would place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number below.

Respectfully submitted,



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Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 180013 for any such fees; and applicant(s) hereby petition for any needed extension of time.

Appendix I

In accordance with 37 CFR 1.121(c)(1)(ii), amended claims 1, 5 and 16 are set forth in a marked-up version below:

1. (amended) A functional film comprising a compressed layer of functional fine particles obtained by compressing a layer containing the functional fine particles that is formed by application onto a support, said functional film being a functional film other than electrical conductive film.

5. (amended) The functional film according to claim 1, which is selected from [an electrical conductive film,] the group consisting of a magnetic film, a ferromagnetic film, a dielectric film, a ferroelectric film, and electrochromic film, an electroluminescent film, an insulating film, a light-absorbing film, a light selecting absorbing film, a reflecting film, a reflection preventing film, a catalyst film and a photocatalyst film.

16. (amended) A functional film comprising a compressed coating layer of functional fine particles on a support, said functional film being a functional film other than electrical conductive film.

Appendix II

In accordance with 37 CFR 1.121(b)(1)(iii), the amended Abstract is set forth in a marked-up version below:

ABSTRACT OF THE DISCLOSURE

[Functional films capable of exhibiting various functions by the application method, and a method for producing the functional films are provided.]

A functional film comprising a compressed layer of functional fine particles obtained by compressing a layer containing the functional fine particles that is formed by application onto a support. The layer containing the functional fine particles is formed by applying a liquid in which the functional fine particles are dispersed onto the support and drying the liquid. The compressed layer of the functional fine particles is preferably obtained by compressing with a compression force of at least 44 N/mm^2 . The functional fine particles are preferably selected from inorganic fine particles. The support is preferably a film made of resin. [As the] The functional films include, for example, a conductive film, a magnetic film, a ferromagnetic film, a dielectric film, a ferroelectric film, an electrochromic film, an electroluminescent film, an insulating film, a light-absorbing film, a light selecting absorbing film, a reflecting film, a reflection preventing film, a catalyst film and a photocatalyst film [may be mentioned].